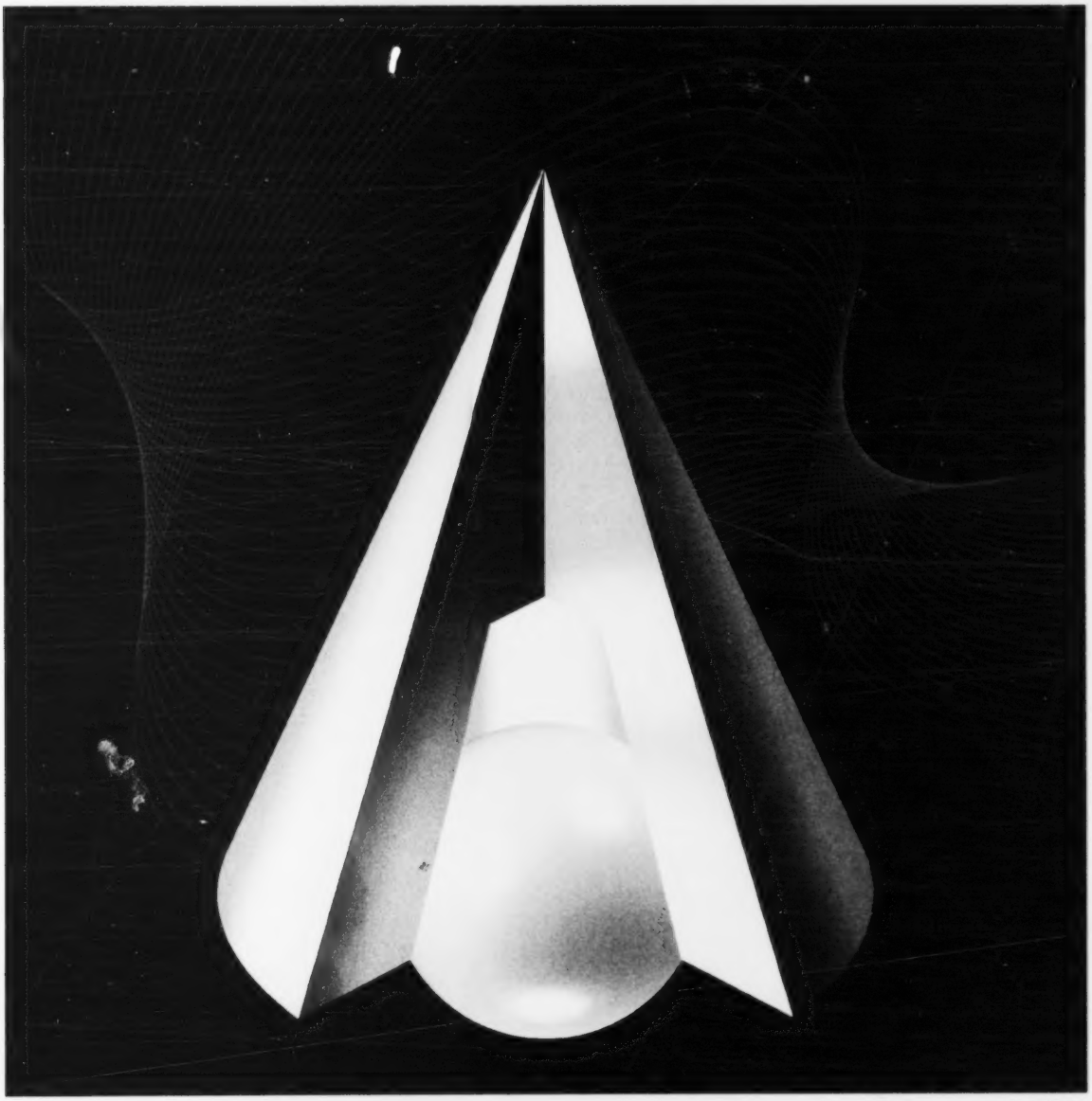
Research Paper Series

Analytical Studies

A Note on Pension Coverage and Earnings Replacement Rates of Retired Men: A Closer Look at Distributions

by Yuri Ostrovsky and Grant Schellenberg

No. 326



Statistics Canada Statistique Canada

Canada

A Note on Pension Coverage and Earnings Replacement Rates of Retired Men: A Closer Look at Distributions

by Yuri Ostrovsky and Grant Schellenberg

11F0019M – No. 326
ISSN 1205-9153
ISBN 978-1-100-16321-5

Statistics Canada
Social Analysis Division
24-I, R.H. Coats Building,
100 Tunney's Pasture Driveway,
Ottawa K1A 0T6

How to obtain more information:
National inquiries line: 1-800-263-1136
E-Mail inquiries: infostats@statcan.gc.ca

July 2010

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2010

All rights reserved. The content of this electronic publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it be done solely for the purposes of private study, research, criticism, review or newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from," if appropriate): Statistics Canada, year of publication, name of product, catalogue number, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, by any means—electronic, mechanical or photocopy—or for any purposes without prior written permission of Licensing Services, Client Services Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

La version française de cette publication est disponible (n° 11F0019M au catalogue, n° 326).

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, the Agency has developed standards of service which its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca, under "About us > Providing services to Canadians."

Analytical Studies
Research Paper Series

The Analytical Studies Research Paper Series provides for the circulation, on a pre-publication basis, of research conducted by Branch staff, visiting Fellows and academic associates. The Research Paper Series is intended to stimulate discussion on a variety of topics including labour, business firm dynamics, pensions, agriculture, mortality, language, immigration, statistical computing and simulation. Readers of the series are encouraged to contact the authors with comments, criticisms and suggestions. A list of titles appears at the end of this document.

Papers in the series are distributed to research institutes and specialty libraries. These papers can be downloaded from the Internet at www.statcan.gc.ca.

Publications Review Committee
Analytical Studies, Statistics Canada
24th Floor, R.H. Coats Building
Ottawa, Ontario K1A 0T6

Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published

Table of Contents

Abstract 5

Executive summary 7

1 Introduction 9

2 Data source, sample, and concepts 10

3 Descriptive results 11

4 Conclusions 17

Appendix 18

References 24

Abstract

In spite of the importance of registered pension plans (RPPs) in discussions of Canada's retirement income system, very few Canadian studies have examined the financial outcomes experienced by RPP members and RPP non-members. Using data from the Longitudinal Administrative Database (LAD), this paper compares the distributions of earnings replacement rates achieved by retired men who were or were not members of a registered pension plan (RPP) in 1991 and/or 1992. The distributions of earnings replacement rates of men who were not RPP members are far more dispersed than those of men who were RPP members. And while the **average** earnings replacement rates of the two groups are generally comparable, the **median** earnings replacement rates of RPP non-members are lower than those of RPP members as a result of asymmetry in the distributions.

Key words: retirement, pensions, seniors, income

Executive summary

In spite of the importance of registered pension plans (RPPs) in discussions of Canada's retirement income system, very few studies have examined the financial outcomes experienced by registered pension plan (RPP) members and RPP non-members. One exception is Ostrovsky and Schellenberg (2009), which provides a broad overview of financial outcomes, focusing on **average** incomes and **average** replacement rates achieved by RPP members and non-members.

This study builds on the Ostrovsky and Schellenberg (2009) analysis by examining the **range** of outcomes experienced by male RPP members and non-members—specifically, the distributions of earnings replacement rates achieved by each group. The earnings replacement rates of RPP non-members are far more dispersed than those of RPP members, reflecting a greater diversity of financial outcomes. Larger shares of RPP non-members than members have earnings replacement rates below various thresholds (e.g., less than 0.50 or less than 0.60), but, at the other end of the distribution, larger shares also have earnings replacement rates of 1.0 or more. While the **average** earnings replacement rates of the two groups are comparable, the **median** earnings replacement rates of RPP non-members are lower than those of RPP members. Among retired men from the middle of the earnings distribution, the median replacement rates of RPP non-members are seven to nine percentage points lower than the median replacement rates of RPP members.

1 Introduction

The design of Canada's retirement income system and the extent to which working-age Canadians are saving adequately for old age continue to be important public-policy issues. Information on wealth serves to inform discussion of these issues, as such information can be used to estimate the income streams that future cohorts of retirees could be expected to generate. However, wealth data remains very limited. Consequently, discussions of retirement income often focus on the saving behaviours of working-age Canadians or the incomes of today's seniors to gauge how tomorrow's seniors might fare.

Registered pension plans (RPPs)—also referred to as *occupational pension plans*, *employer pension plans*, or *workplace pension plans*—are an important aspect of this discussion. Not only are RPPs a central component of Canada's retirement income system, but they are also a source of concern given declining rates of pension coverage (particularly in the private sector), changes in the characteristics of RPPs, and concerns about the financial health of some private sector plans.

Yet, in spite of the importance of RPPs, very few Canadian studies have examined the financial outcomes experienced by registered pension plan (RPP) members and non-members. One exception is Ostrovsky and Schellenberg (2009). In that study, longitudinal data are used to examine the retirement and financial outcomes of individuals who were RPP members and individuals who were not RPP members when in their mid-fifties in 1991. Among all individuals in the sample, RPP non-members receive lower average incomes from pensions and superannuation than do RPP members, but higher average incomes from other sources, including investments, dividends, and capital gains. The results also show that RPP non-members are more likely than RPP members to continue working into their late sixties and early seventies. However, among individuals who are retired, RPP non-members achieve, on average, earnings replacement rates comparable to those of RPP members.

Ostrovsky and Schellenberg (2009) provide a broad overview of financial outcomes, focusing on **average** incomes and **average** replacement rates achieved by RPP members and non-members. However, the study does not provide information on the **range** of outcomes experienced by individuals in those groups. While the range of outcomes may be quite different between groups, the **average** outcomes for the two groups may be similar. Indeed, as shown in this paper, the shares of RPP members and non-members with earnings replacement rates above or below various thresholds vary considerably, and yet yield average replacement rates that are comparable for the groups as a whole. And while the replacement rates of RPP members are quite tightly clustered around the mid-point of the distribution, the replacement rates of RPP non-members are far more dispersed, reflecting a greater diversity of financial outcomes.

In addition to examining the distribution of earnings replacement rates in 2006, this paper also incorporates data for 2007 recently added to the Longitudinal Administrative Database (LAD). Using this additional year of data, the average annual earnings replacement rate achieved by retirees is calculated over the years 2005, 2006, and 2007. The intent is to reduce the influence of anomalous events in a single year, such as lump-sum RRSP (Registered Retirement Savings Plan) withdrawals or one-time realization of capital gains, on the replacement rate observed. The adjustment results in slightly higher earnings replacement rates among retired men, particularly those who are not RPP members.

The paper begins with a short overview of the data source, sample, and concepts used in this study. This discussion is kept to a minimum since these issues are discussed in detail in

Ostrovsky and Schellenberg (2009). We then present descriptive information on the earnings replacement rates achieved by RPP members and RPP non-members. Supplementary charts and a text table are included in the appendix, along with results from several multivariate models.

2 Data source, sample, and concepts

The data source and methods used for this study closely follow Ostrovsky and Schellenberg (2009). The data are drawn from the 20% version of the LAD, which is derived from taxation data.

The information in the LAD does not allow RPP members and RPP non-members to be distinguished on the basis of retirement income received in old age. Instead, pension membership must be identified on the basis of pension contributions made while individuals are still in the workforce. Complete information on such contributions is available back to 1991. The age at which replacement rates are calculated is a further consideration for sample selection. There is merit in calculating replacement rates for seniors in their seventies, rather than their sixties, since, in this way, there is greater likelihood of capturing income streams following mandatory conversion of RRSP assets.

For these reasons, this analysis is limited to tax filers who were aged 55 to 57 in 1991 and hence aged 70 to 72 in 2006. Several other selection criteria are imposed. Participation in, and contributions to, RRSPs and RPPs are predicated on labour force participation and receipt of employment earnings. Consequently, the sample is limited to individuals who filed a tax return in 1989, 1990, and 1991, who had positive earnings in each of those years, and whose average annual earnings over that period were $10,000 or more.[1] Individuals who were self-employed at age 55 to 57 are excluded because they were generally not eligible to contribute to RPPs.[2] However, those who had become self-employed by age 70 to 72 are included. Tax filers in the sample are categorized into five groups of equal size according to their average annual earnings over 1989-1991. The extent to which earnings are replaced by other income sources at age 70 to 72 can thus be examined at different points across the distribution.

The LAD includes a Pension Adjustment variable that captures both employee and employer contributions to RPPs, as well as contributions to Deferred Profit Sharing Plans. Positive values on the Pension Adjustment variable in 1991 and 1992 are coded as follows in each year: "1" to indicate RPP membership and "0" to denote RPP non-membership. The focus of this analysis is on the earnings replacement rates of individuals who: (i) did not have pension coverage in either 1991 or 1992; or (ii) who had pension coverage in both years.

Earnings replacement rates are calculated as in Ostrovsky and Schellenberg (2009). That is, total income (before taxes) in 2006 is included in the numerator, and average annual earnings (before taxes) received in 1989, 1990, and 1991 are included in the denominator. In addition, a supplementary earnings replacement rate is calculated using the same approach, but averaged over the years 2005, 2006, and 2007.

The discussion of earnings replacement rates in this paper is limited to "retired" individuals, defined as those individuals whose earnings in 2006 were less than 10% of the average annual

1. Earnings are defined as the sum of T4-reported earnings (i.e., wages, salaries and commissions) and other employment income (such as tips and gratuities).
2. Tax filers with modest net self-employment incomes (less than $500 annually) were retained in the sample.

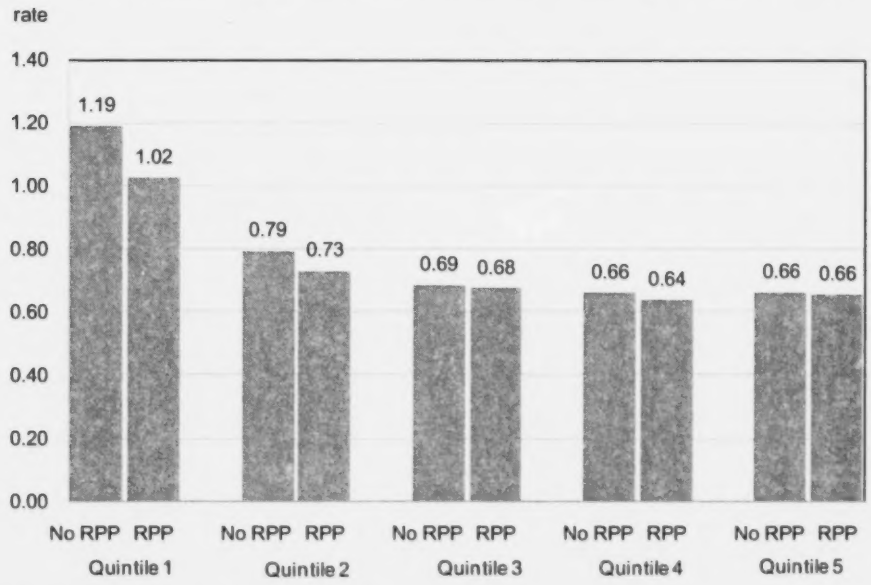
earnings that they received over the 1989-1991 period. Results based on the average earnings replacement rate over the 2005 to 2007 period are limited to individuals who were retired in those years.

Finally, as noted in Ostrovsky and Schellenberg, women who were in their mid-fifties in 1991 had considerably lower employment rates than women in that age group do now, and fewer still met the sample selection criteria used for this study. Consequently, a sample of women would be much less representative of the total population of women than a sample of men is for the total population of men. For that reason, the analysis presented below is limited to men.

3 Descriptive results

As documented in Ostrovsky and Schellenberg (2009), average earnings replacement rates of retired men in the sample do not differ significantly between RPP members and RPP non-members in 2006. This is evident in Chart 1, particularly for retired men in the third, fourth, and fifth 1989-1991 earnings quintiles.[3] Average replacement rates are somewhat lower among RPP members than non-members in the first and second quintiles.

Chart 1
Average earnings replacement rates of retired men aged 70 to 72, by pension coverage and pre-retirement earnings quintile, 2006

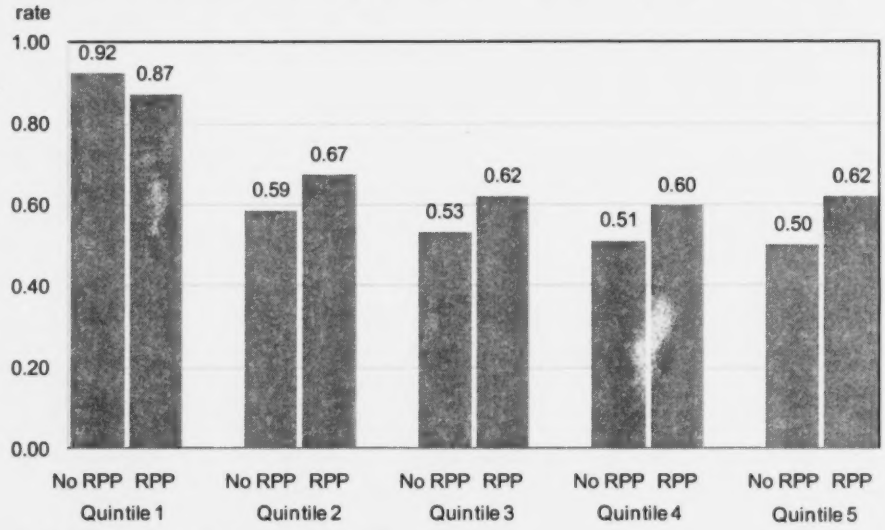


Note: "RPP" stands for registered pension plan.

3. Readers should note that these are unadjusted averages, given that socio-economic characteristics, such as immigration status, marital status, years since retirement, and pre-retirement earnings, are not taken into account.

Differences are evident between RPP members and RPP non-members when median replacement rates in 2006 are compared.[4] More specifically, the median replacement rates of RPP members in Q2, Q3, and Q4 are about 9 percentage points higher than the median replacement rates of RPP non-members (Chart 2). Among retired men in Q5, the difference is 12 percentage points.

Chart 2
Median earnings replacement rates of retired men aged 70 to 72, by pension coverage and pre-retirement earnings quintile, 2006



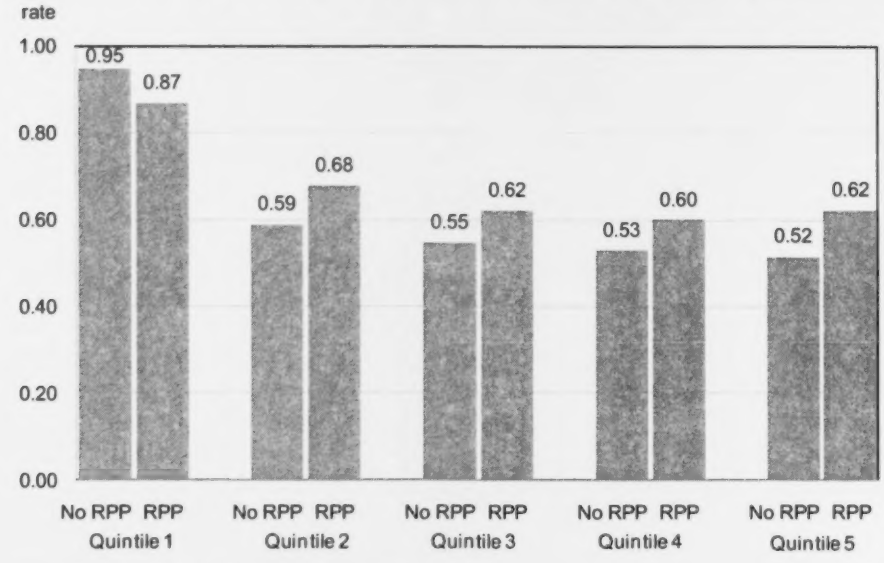
Note: "RPP" stands for registered pension plan.

When calculated over the 2005-2007 period, rather than for 2006 alone, the median earnings replacement rates of RPP non-members increases by two percentage points in most quintiles. For example, the median rate for RPP non-members in Q3 is 0.53 in 2006, but is 0.55 when measured over 2005-2007. The same pattern is evident among RPP non-members in Q1, Q4, and Q5.[5] Also, when calculated over the 2005-2007 period rather than for 2006 alone, the difference between the median replacement rates of RPP members and non-members in Q3, Q4, and Q5 narrows by two percentage points (Chart 3).

As a measure of central tendency, the median is less sensitive than the mean to values at the tails of the distribution. As shown in charts 4 through 8 and in the summary measures provided in Table 1, the replacement rate distributions of RPP members and RPP non-members are different.

4. The median replacement rate is the mid-point of the distribution, with one-half of the sample having a replacement rate below the median and one-half of the sample having a replacement rate above it.
5. The median earnings replacement rate for RPP members in Q2 increases by one percentage point when calculated over 2005-2007 rather than for 2006, but changes are not evident in the other four quintiles.

Chart 3
Median earnings replacement rates of retired men aged 70 to 72, by pension coverage and pre-retirement earnings quintile, 2005 to 2007



Note: "RPP" stands for registered pension plan.

Chart 4
Retired men from Quintile 1: Earnings replacement rates distribution in 2006, by pension coverage

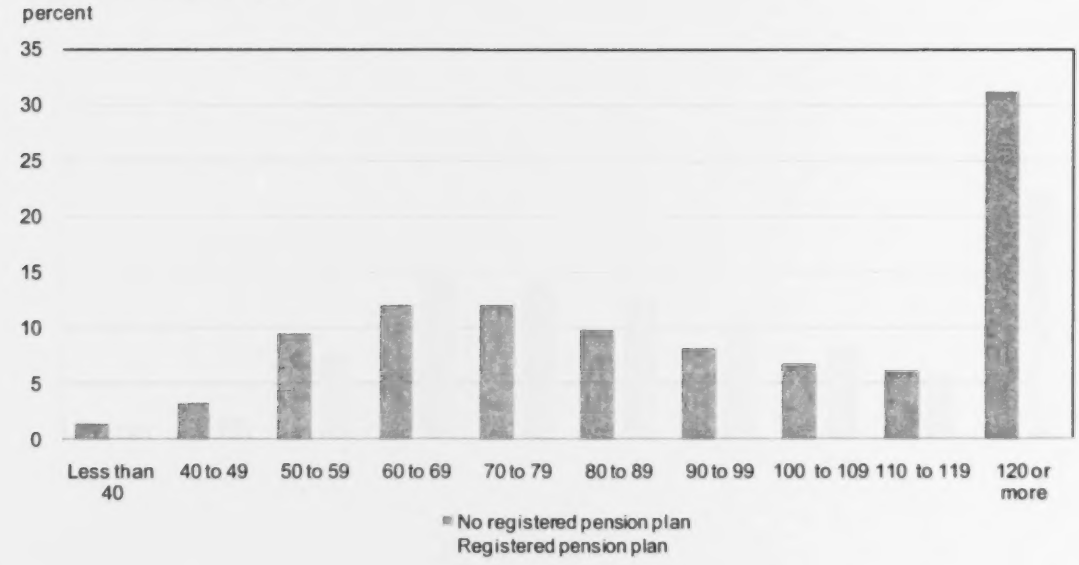


Chart 5
Retired men from Quintile 2: Earnings replacement rates distribution in 2006, by pension coverage

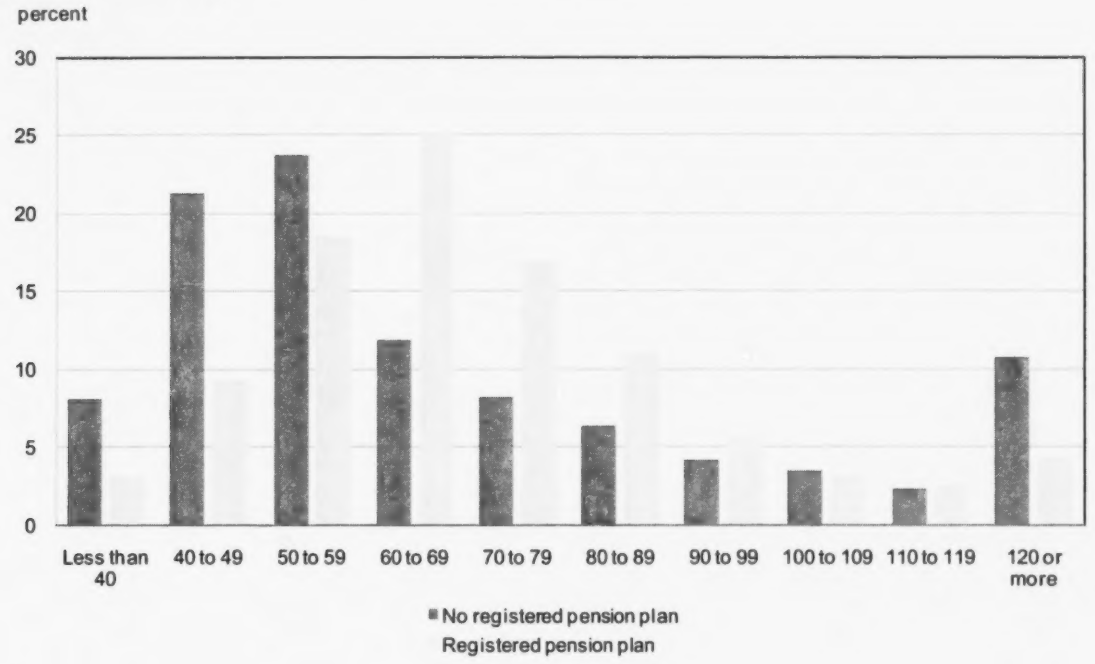


Chart 6
Retired men from Quintile 3: Earnings replacement rates distribution in 2006, by pension coverage

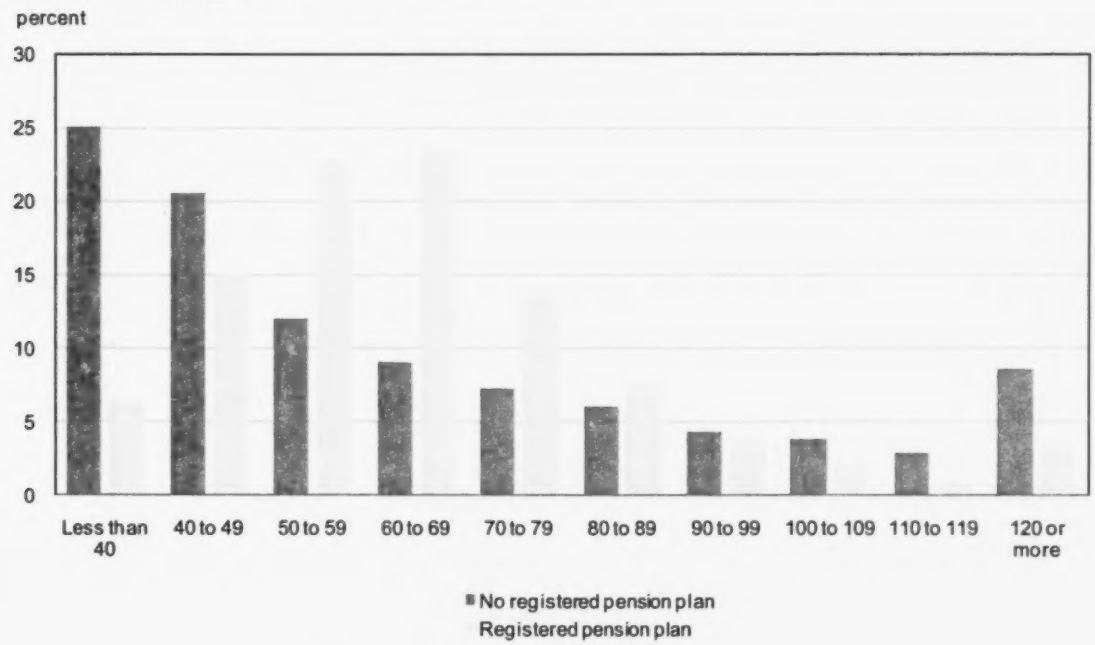


Chart 7
Retired men from Quintile 4: Earnings replacement rates distribution in 2006, by pension coverage

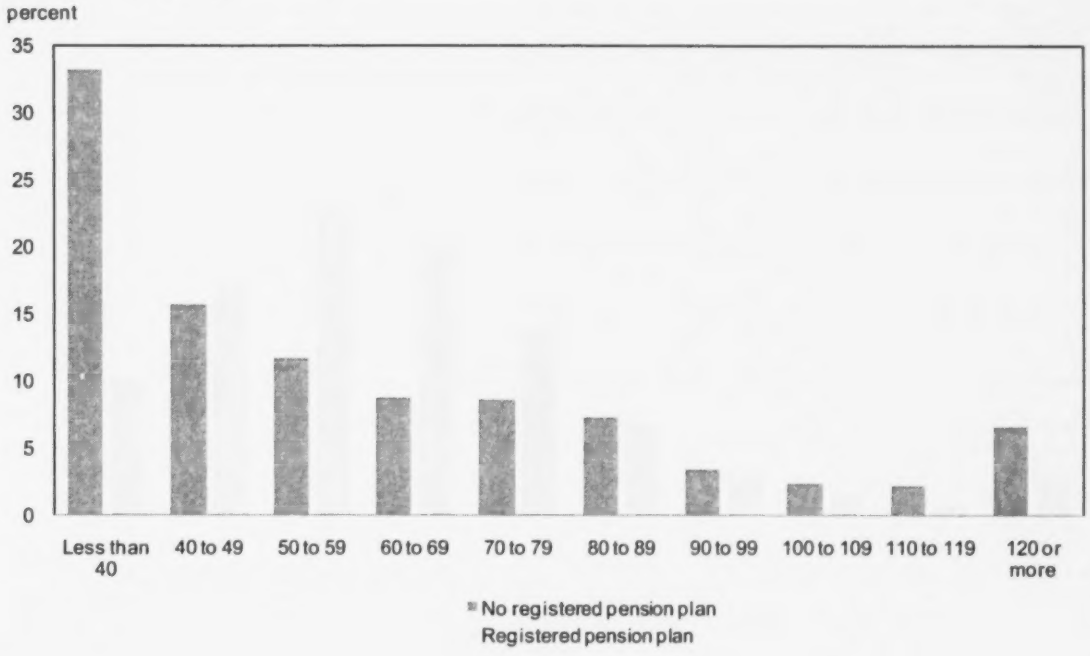


Chart 8
Retired men from Quintile 4: Earnings replacement rates distribution in 2006, by pension coverage

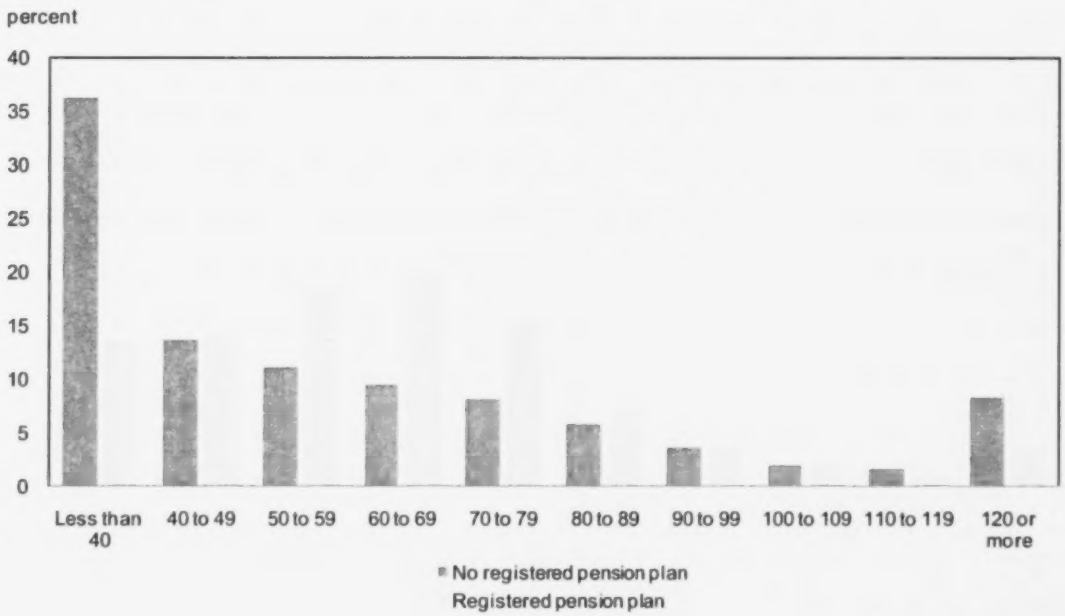


Table 1
Percent of retired men with earnings replacement rates below or above selected thresholds in 2006, by pension coverage and 1989 to 1991 earnings quintiles

	No registered pension plan	Registered pension plan	Difference
		percentage	
Quintile 1			
Less than .40	1.5	1.3	0.2
Less than .50	4.6	3.4	1.2
Less than .60	14.1	10.9	3.2
More than 1.00	43.9	36.5	7.4
Quintile 2			
Less than .40	8.1	3.1	5.0
Less than .50	29.3	12.4	16.9
Less than .60	53.1	31.0	22.1
More than 1.00	16.3	10.1	6.3
Quintile 3			
Less than .40	25.1	6.5	18.6
Less than .50	45.7	21.5	24.1
Less than .60	57.7	44.3	13.4
More than 1.00	15.3	6.5	8.9
Quintile 4			
Less than .40	33.3	10.2	23.1
Less than .50	49.1	27.7	21.3
Less than .60	60.8	50.7	10.1
More than 1.00	11.2	5.3	5.9
Quintile 5			
Less than .40	36.3	13.7	22.7
Less than .50	50.0	27.9	22.1
Less than .60	61.2	46.5	14.7
More than 1.00	11.8	7.0	4.8

In 2006, the largest shares of retired men from Q1 had earnings replacement rates of 1.00 or more. Those without pension coverage had lower earnings in 1989-1991 than did those with coverage (a difference in average earnings between the two groups of about $3,000), and this partially explains the larger share of RPP non-members with earnings replacement rates of 1.00 or more.

Among retired men from the middle of the 1989-1991 earnings distribution (i.e. Q2, Q3, and Q4), RPP non-members are more likely than RPP members to have earnings replacement rates below .40 in 2006 (Table 1). This difference ranges from 5 percentage points in Q2 to 23 percentage points in Q4. Similarly, RPP non-members are more likely to have earnings replacement rates below .50 and below .60 in that year.

When earnings replacement rates are calculated over 2005-2007, the shares of retired men below these thresholds decline by about one percentage point, and the magnitude of the difference between RPP members and RPP non-members narrows by about one percentage point (Appendix, Charts 2 to 6).

At the upper end of the distribution, larger shares of RPP non-members than members have earnings replacement rates of 1.00 or more in 2006. The magnitude of this difference ranges from six to nine percentage points among retired men in Q2, Q3, and Q4.

Overall, the distributions of earnings replacement rates differ considerably for RPP members and non-members. The large shares of RPP non-members with replacement rates below .40 are notable in this regard, as are the relatively large shares of RPP non-members with replacement rates below .50 or .60. At the other end of the distribution, RPP non-members are more likely than RPP members to have earnings replacement rates of 1.00 or more, although the magnitude of this difference between RPP members and non-members at the higher end of the distribution is smaller than the differences at the lower end of the distribution.

The calculation of replacement rates across the 2005-2007 period yields slightly higher estimates than those calculated for 2006 alone. For example, in most quintiles, the shares of RPP non-members with earnings replacement rates below specified thresholds decline by about one to three percentage points, and the median replacement rates of RPP non-members increase by two percentage points. The 2005-2007 approach has a more modest influence on the rates of RPP members, yielding a slightly narrower gap between the two groups.

4 Conclusions

This paper extends our earlier work (Ostrovsky and Schellenberg 2009), which compared the average replacement rates of men who had RPPs and men who did not have RPPs. In this study, we focus on an alternative measure—the median replacement rate—as this allows us to develop a richer picture of the relative outcomes of the two groups.

Comparisons of well-being between two groups based on income statistics face the difficulty of finding summary statistics that succinctly summarize differences in two populations that have a range of outcomes—varying from low to high replacement rates.

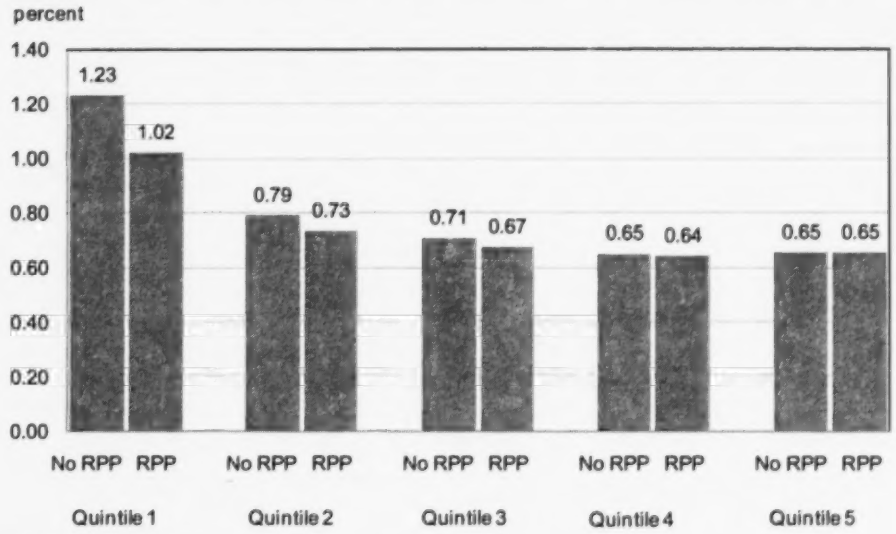
Means are commonly used to provide a measure of central tendencies of distributions. An alternate measure of central tendency is the median, which divides the population into two equal groups at a midpoint, with 50% of the observations above and 50% of the observations below. When distributions of observations are symmetric, the two measures will be the same; when the distributions are not symmetric, the two measures will differ.

The replacement rates for men without an RPP are about the same as those for men with an RPP when means (or averages) are compared, but are lower when medians are compared, as a result of asymmetry in the distributions. In fact, the replacement rates of both groups are asymmetric, with those of the non-RPP members having a greater degree of asymmetry.

Whether a person has an RPP depends on a complex set of choices and circumstances. The possession of an RPP may be perceived to involve a greater degree of certainty about retirement income than the reverse. Individuals without an RPP must rely on income streams from employment incomes, investment, capital gains, or the liquidation of business assets whose outcomes probably involve more uncertainty than the stream to be derived from a pension plan. The results of this study show that those without an RPP are subject to a range of outcomes whose variance is larger. On average, earnings replacement rates are about the same—but this is because there are a larger proportion of better outcomes along with a large proportion of poorer outcomes.

Appendix

Chart 1
Average earnings replacement rates of retired men aged 70 to 72, by pension coverage and pre-retirement earnings quintile, 2005 to 2007



Note: "RPP" stands for registered pension plan.

Table 2
Percent of retired men with earnings replacement rates below or above selected thresholds in 2005 to 2007, by pension coverage and 1989 to 1991 earnings quintiles

	No registered pension plan	Registered pension plan	Difference
		percentage	
Quintile 1			
Less than .40	0.6	0.4	0.1
Less than .50	3.3	2.6	0.7
Less than .60	12.3	10.4	1.9
More than 1.00	45.9	36.5	9.3
Quintile 2			
Less than .40	6.7	1.7	5.1
Less than .50	28.5	10.9	17.6
Less than .60	52.0	29.8	22.2
More than 1.00	16.8	9.7	7.1
Quintile 3			
Less than .40	23.5	5.7	17.8
Less than .50	44.4	20.9	23.4
Less than .60	55.2	44.5	10.7
More than 1.00	16.0	6.2	9.8
Quintile 4			
Less than .40	31.0	8.8	22.1
Less than .50	46.1	26.4	19.8
Less than .60	59.1	50.6	8.5
More than 1.00	12.2	5.2	7.0
Quintile 5			
Less than .40	35.4	13.0	22.4
Less than .50	47.9	28.0	19.8
Less than .60	59.2	45.8	13.4
More than 1.00	12.0	6.8	5.2

Chart 2
Retired men from Quintile 1: Earnings replacement rates distribution in 2005 to 2007, by pension coverage

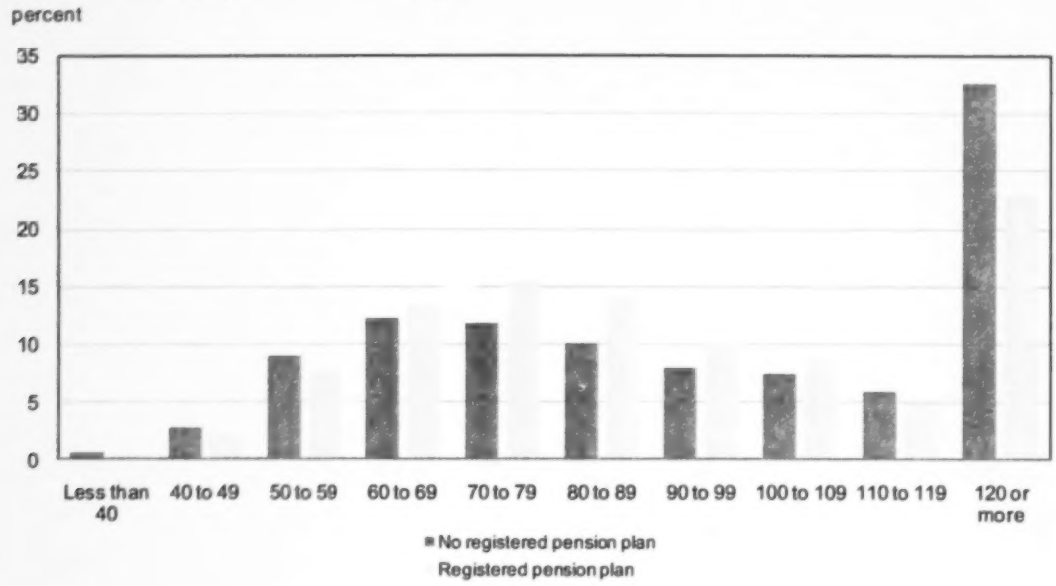


Chart 3
Retired men from Quintile 2: Earnings replacement rates distribution in 2005 to 2007, by pension coverage

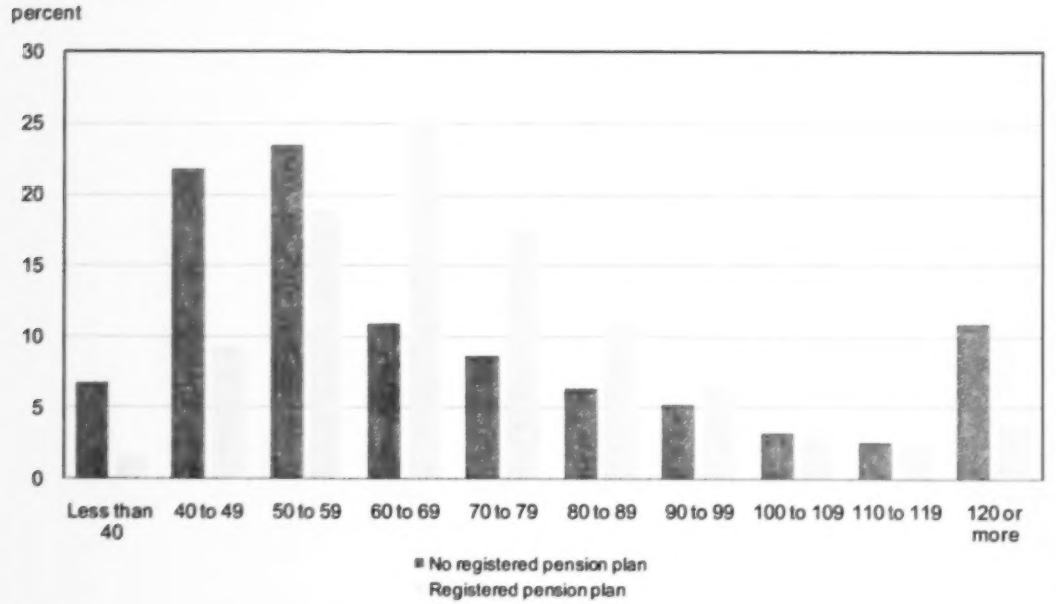


Chart 4
Retired men from Quintile 3: Earnings replacement rates distribution in 2005 to 2007, by pension coverage

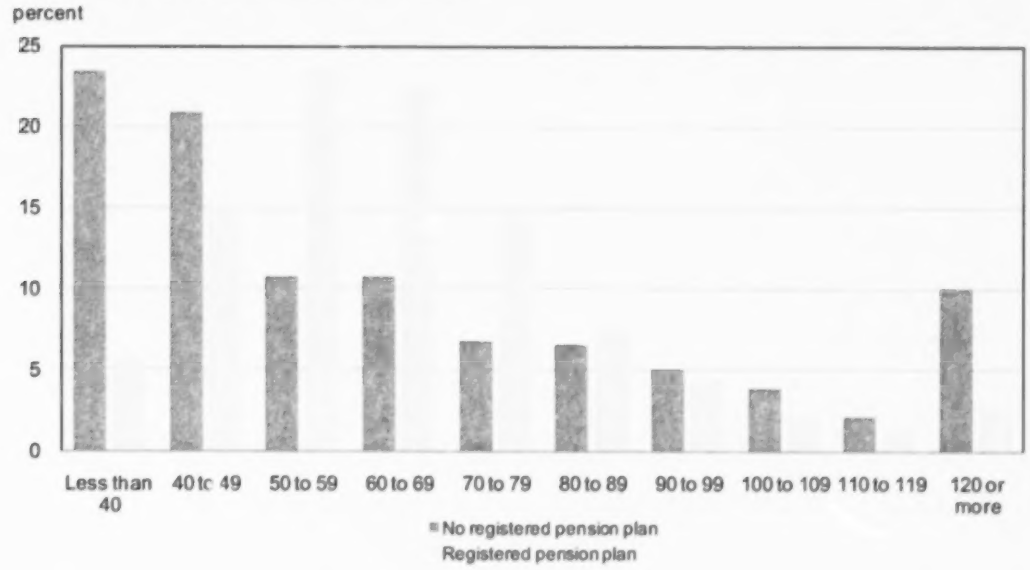


Chart 5
Retired men from Quintile 4: Earnings replacement rates distribution in 2005 to 2007, by pension coverage

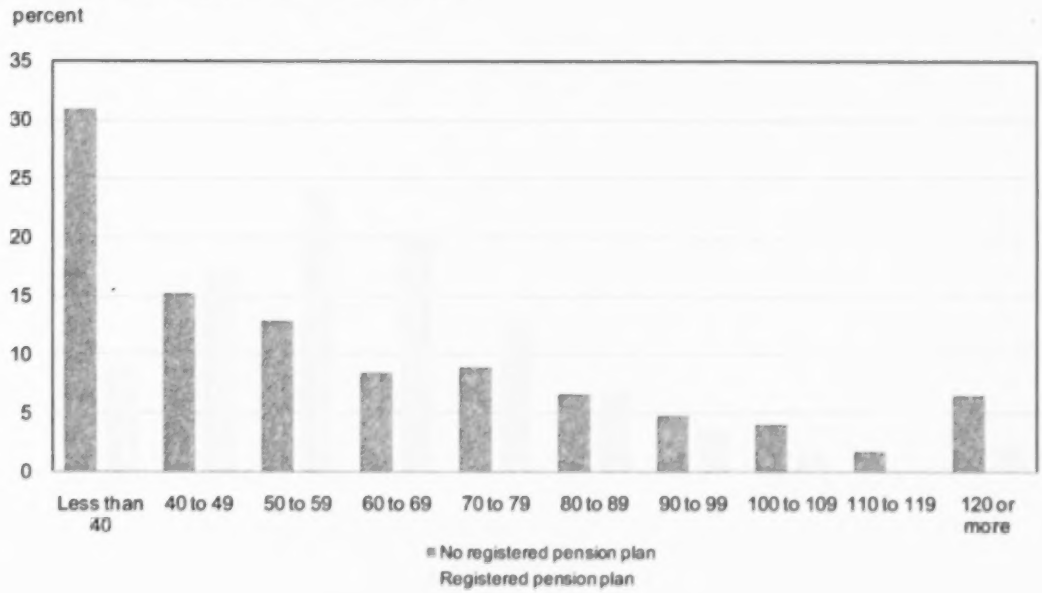
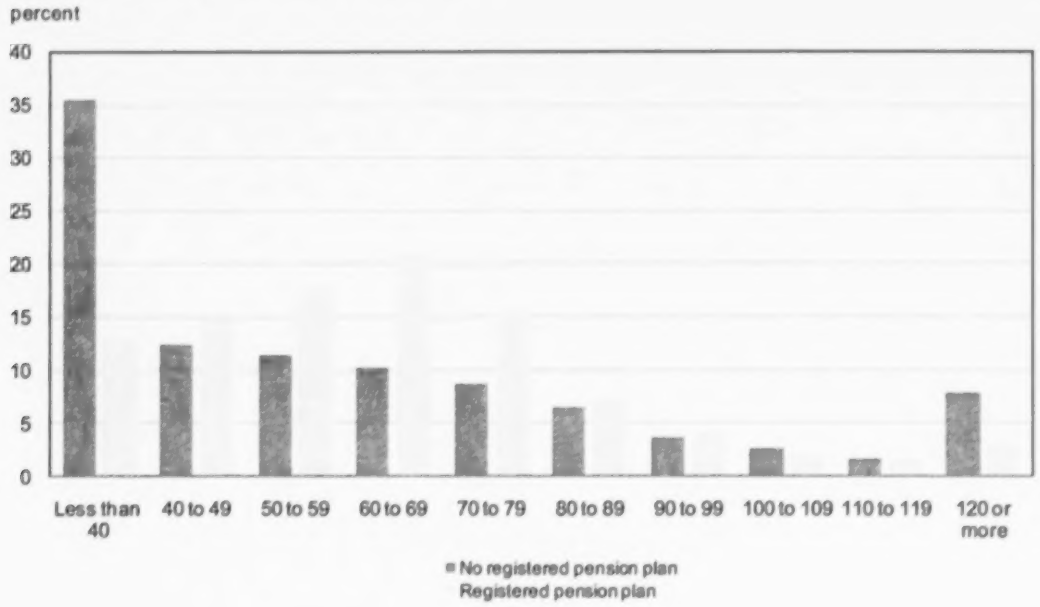


Chart 6
Retired men from Quintile 5: Earnings replacement rates distribution in 2005 to 2007, by pension coverage



Multivariate results

The descriptive results presented above do not take into account differences in the replacement rates of male retirees attributable to socio-economic characteristics, aside from pension coverage. In their original analysis, Ostrovsky and Schellenberg (2009) run an Ordinary Least Squares (OLS) regression model in which the earnings replacement rates achieved by retirees in 2006 is the dependent variable, and pension status, immigration status, marital status, years since retirement, and 1989-1991 earnings are included as explanatory variables. Separate regression models were run for retired men in each of the five 1989-1991 earnings quintiles. Selected results from that model—specifically, the coefficients associated with pension coverage—are presented in Panel 1 of Table 2. As noted earlier, RPP coverage is not significantly associated with earnings replacement rates in the original model.[6] This is also the case when earnings replacement rates in 2005-2007 are included as the dependent variable in the model (Panel 2).

However, when a dependent variable is a positive ratio (such as is the case with earnings replacement rates), economists and statisticians often prefer to use the log of the dependent variable (Y) in regression models. There are several reasons for doing so. First, if there are outliers in the distribution of the dependent variable, their influence on coefficient estimates will be considerably smaller when the variable in the regression is log(Y) rather than Y. Second, the distribution of log(Y) is often more likely than the distribution of Y to resemble a normal distribution than the distribution of Y. The normality of log(Y) improves the efficiency of estimates, and many statistical tests rely on the assumption of such normality. Finally, if the variable is log(Y), coefficient estimates can be interpreted as percentage changes in Y associated with marginal changes in the explanatory variables.

6. In Ostrovsky and Schellenberg (2009), the pension coefficient for retired men in Q2 is significant at p>.1. In Table 3 of this paper, only those coefficients significant at p>.05 are shown.

The results from the OLS regression, with the log of replacement rates included as the dependent variable, are shown in Panels 3 and 4 of Table 3. Considering log replacement rates in 2006, there is a consistent (across quintiles) and significant correlation with pension coverage, in the range of 6% to 10% among retirees in Q2, Q3, and Q4. The correlation is slightly weaker, in the range of 5% to 9% among retirees in Q2, Q3, and Q4, when log replacement rates over 2005-2007 are included as the dependent variable in the model.

Table 3
Selected Ordinary Least Squares (OLS) regression results on earnings replacement rates achieved by retired men

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			percent		
Panel 1, 2006					
Unadjusted replacement rate					
No pension (reference group)	...	...	...	...	...
Pension	ns	ns	ns	ns	ns
Panel 2, 2005 to 2007					
Unadjusted replacement rate					
No pension (reference group)	...	...	...	...	...
Pension	ns	-0.039	ns	ns	ns
Panel 3, 2006					
Log replacement rate					
No pension (reference group)	...	...	...	...	...
Pension	0.054	0.064	0.081	0.104	0.190
Panel 4, 2005 to 2007					
Log replacement rate					
No pension (reference group)	...	...	...	...	...
Pension	0.038	0.057	0.050	0.089	0.164

Note: ns stands for not statistically significant.

References

Ostrovsky, Y., and Grant Schellenberg. 2009. *Pension Coverage, Retirement Status, and Earnings Replacement Rates Among a Cohort of Canadian Seniors.* Statistics Canada catalogue no. 11F0019M. Ottawa. Analytical Studies Branch Research Paper Series. No. 321.

Analytical Studies Research Paper Series
Catalogue Number 11F0019M

No. 1 Behavioural Response in the Context of Socio-Economic Microanalytic Simulation, **Lars Osberg (April 1986)**

No. 2 Unemployment and Training, **Garnett Picot (1987)**

No. 3 Homemaker Pensions and Lifetime Redistribution, **Michael Wolfson (August 1987)**

No. 4 Modeling the Lifetime Employment Patterns of Canadians, **Garnett Picot (Winter 1986)**

No. 5 Job Loss and Labour Market Adjustment in the Canadian Economy, **Garnett Picot and Ted Wannell (1987)**

No. 6 A System of Health Statistics: Toward a New Conceptual Framework for Integrating Health Data, **Michael C. Wolfson (March 1990)**

No. 7 A Prototype Micro-Macro Link for the Canadian Household Sector, **Hans J. Adler and Michael C. Wolfson (August 1987)**

No. 8 Notes on Corporate Concentration and Canada's Income Tax, **Michael C. Wolfson (October 1987)**

No. 9 The Expanding Middle: Some Canadian Evidence on the Deskilling Debate, **John Myles (Fall 1987)**

No. 10 The Rise of the Conglomerate Economy, **Jorge Niosi (1987)**

No. 11 Energy Analysis of Canadian External Trade: 1971 and 1976, **K.E. Hamilton (1988)**

No. 12 Net and Gross Rates of Land Concentration, **Ray D. Bollman and Philip Ehrensaft (1988)**

No. 13 Cause-Deleted Life Tables for Canada (1972 to 1981): An Approach Towards Analyzing Epidemiological Transition, **Dhruva Nagnur and Michael Nagrodski (November 1987)**

No. 14 The Distribution of the Frequency of Occurrence of Nucleotide Subsequences, Based on Their Overlap Capability, **Jane F. Gentleman and Ronald C. Mullin (1988)**

No. 15 Immigration and the Ethnolinguistic Character of Canada and Quebec, **Réjean Lachapelle (1988)**

No. 16 Integration of Canadian Farm and Off-Farm Markets and the Off-Farm Work of Women, Men and Children, **Ray D. Bollman and Pamela Smith (1988)**

No. 17 Wages and Jobs in the 1980s: Changing Youth Wages and the Declining Middle, **J. Myles, G. Picot and T. Wannell (July 1988)**

No. 18 A Profile of Farmers with Computers, **Ray D. Bollman (September 1988)**

No. 19 Mortality Risk Distributions: A Life Table Analysis, **Geoff Rowe (July 1988)**

No. 20 Industrial Classification in the Canadian Census of Manufactures: Automated Verification Using Product Data, **John S. Crysdale (January 1989)**

No. 21 Consumption, Income and Retirement, **A.L. Robb and J.B. Burbridge (1989)**

No. 22 Job Turnover in Canada's Manufacturing Sector, **John R. Baldwin and Paul K. Gorecki (Summer 1989)**

No. 23 Series on The Dynamics of the Competitive Process, **John R. Baldwin and Paul K. Gorecki (1990)**

A. Firm Entry and Exit Within the Canadian Manufacturing Sector.
B. Intra-Industry Mobility in the Canadian Manufacturing Sector.
C. Measuring Entry and Exit in Canadian Manufacturing: Methodology.
D. The Contribution of the Competitive Process to Productivity Growth: The Role of Firm and Plant Turnover.
E. Mergers and the Competitive Process.
F. n/a
G. Concentration Statistics as Predictors of the Intensity of Competition.
H. The Relationship Between Mobility and Concentration for the Canadian Manufacturing Sector.

No. 24 Mainframe SAS Enhancements in Support of Exploratory Data Analysis, **Richard Johnson, Jane F. Gentleman and Monica Tomiak (1989)**

No. 25 Dimensions of Labour Market Change in Canada: Intersectoral Shifts, Job and Worker Turnover, **John R. Baldwin and Paul K. Gorecki (1989)**

No. 26 The Persistent Gap: Exploring the Earnings Differential Between Recent Male and Female Postsecondary Graduates, **Ted Wannell (1989)**

No. 27 Estimating Agricultural Soil Erosion Losses From Census of Agriculture Crop Coverage Data, **Douglas F. Trant (1989)**

No. 28 Good Jobs/Bad Jobs and the Declining Middle: 1967-1986, **Garnett Picot, John Myles, Ted Wannel (1990)**

No. 29 Longitudinal Career Data for Selected Cohorts of Men and Women in the Public Service, 1978-1987, **Garnett Picot and Ted Wannell (1990)**

No. 30 Earnings and Death-Effects Over a Quarter Century, **Michael Wolfson, Geoff Rowe, Jane F. Gentleman and Monica Tomiak (1990)**

No. 31 Firm Response to Price Uncertainty: Tripartite Stabilization and the Western Canadian Cattle Industry, **Theodore M. Horbulyk (1990)**

No. 32 Smoothing Procedures for Simulated Longitudinal Microdata, **Jane F. Gentleman,Dale Robertson and Monica Tomiak (1990)**

No. 33 Patterns of Canadian Foreign Direct Investment Abroad, **Paul K. Gorecki (1990)**

No. 34 POHEM - A New Approach to the Estimation of Health Status Adjusted Life Expectancy, **Michael C. Wolfson (1991)**

No. 35 Canadian Jobs and Firm Size: Do Smaller Firms Pay Less?, **René Morissette (1991)**

No. 36 Distinguishing Characteristics of Foreign High Technology Acquisitions in Canada's Manufacturing Sector, **John R. Baldwin and Paul K. Gorecki (1991)**

No. 37 Industry Efficiency and Plant Turnover in the Canadian Manufacturing Sector, **John R. Baldwin (1991)**

No. 38 When the Baby Boom Grows Old: Impacts on Canada's Public Sector, **Brian B. Murphy and Michael C. Wolfson (1991)**

No. 39 Trends in the Distribution of Employment by Employer Size: Recent Canadian Evidence, **Ted Wannell (1991)**

No. 40 Small Communities in Atlantic Canada: Their Industrial Structure and Labour Market Conditions in the Early 1980s, **Garnett Picot and John Heath (1991)**

No. 41 The Distribution of Federal/Provincial Taxes and Transfers in Rural Canada, **Brian B. Murphy (1991)**

No. 42 Foreign Multinational Enterprises and Merger Activity in Canada, **John Baldwin and Richard Caves (1992)**

No. 43 Repeat Users of the Unemployment Insurance Program, **Miles Corak (1992)**

No. 44 POHEM -- A Framework for Understanding and Modeling the Health of Human Populations, **Michael C. Wolfson (1992)**

No. 45 A Review of Models of Population Health Expectancy: A Micro-Simulation Perspective, **Michael C. Wolfson and Kenneth G. Manton (1992)**

No. 46 Career Earnings and Death: A Longitudinal Analysis of Older Canadian Men, **Michael C. Wolfson, Geoff Rowe, Jane Gentleman and Monica Tomiak (1992)**

No. 47 Longitudinal Patterns in the Duration of Unemployment Insurance Claims in Canada, **Miles Corak (1992)**

No. 48 The Dynamics of Firm Turnover and the Competitive Process, **John Baldwin (1992)**

No. 49 Development of Longitudinal Panel Data from Business Registers: Canadian Experience, **John Baldwin, Richard Dupuy and William Penner (1992)**

No. 50 The Calculation of Health-Adjusted Life Expectancy for a Canadian Province Using a Multi-Attribute Utility Function: A First Attempt, **J.-M. Berthelot, R. Roberge and M.C. Wolfson (1992)**

No. 51 Testing the Robustness of Entry Barriers, **J.R. Baldwin and M. Rafiquzzaman (1993)**

No. 52 Canada's Multinationals: Their Characteristics and Determinants, **Paul K. Gorecki (1992)**

No. 53 The Persistence of Unemployment: How Important were Regional Extended Unemployment Insurance Benefits?, **Miles Corak, Stephen Jones (1993)**

No. 54 Cyclical Variation in the Duration of Unemployment Spells, **Miles Corak (1992)**

No. 55 Permanent Layoffs and Displaced Workers: Cyclical Sensitivity, Concentration, and Experience Following the Layoff, **Garnett Picot and Wendy Pyper (1993)**

No. 56 The Duration of Unemployment During Boom and Bust, **Miles Corak (1993)**

No. 57 Getting a New Job in 1989-90 in Canada, **René Morissette (1993)**

No. 58 Linking Survey and Administrative Data to Study Determinants of Health, **P. David, J.-M. Berthelot and C. Mustard (1993)**

No. 59 Extending Historical Comparability in Industrial Classification, **John S. Crysdale (1993)**

No. 60 What is Happening to Earnings Inequality in Canada?, **R. Morissette, J. Myles and G. Picot (June 1994)**

No. 61 Structural Change in the Canadian Manufacturing Sector, (1970-1990), **J. Baldwin and M. Rafiquzzaman (July 1994)**

No. 62 Unemployment Insurance, Work Disincentives, and the Canadian Labour Market: An Overview, **Miles Corak (January 1994)**

No. 63 Recent Youth Labour Market Experiences in Canada, **Gordon Betcherman and René Morissette (July 1994)**

No. 64 A Comparison of Job Creation and Job Destruction in Canada and the United States, **John Baldwin, Timothy Dunne and John Haltiwanger (July 1994)**

No. 65 What is Happening to Weekly Hours Worked in Canada?, **René Morissette and Deborah Sunter (June 1994)**

No. 66 Divergent Inequalities -- Theory, Empirical Results and Prescriptions, **Michael C. Wolfson (May 1995)**

No. 67 XEcon: An Experimental / Evolutionary Model of Economic Growth, **Michael C. Wolfson (June 1995)**

No. 68 The Gender Earnings Gap Among Recent Postsecondary Graduates, 1984-92, **Ted Wannell and Nathalie Caron (November 1994)**

No. 69 A Look at Employment-Equity Groups Among Recent Postsecondary Graduates: Visible Minorities, Aboriginal Peoples and the Activity Limited, **Ted Wannell and Nathalie Caron (November 1994)**

No. 70 Employment Generation by Small Producers in the Canadian Manufacturing Sector, **John R. Baldwin and Garnett Picot (November 1994)**

No. 71 Have Small Firms Created a Disproportionate Share of New Jobs in Canada? A Reassessment of the Facts, **Garnett Picot, John Baldwin and Richard Dupuy (November 1994)**

No. 72 Selection Versus Evolutionary Adaptation: Learning and Post-Entry Performance, **J. Baldwin and M. Rafiquzzaman (May 1995)**

No. 73 Business Strategies in Innovative and Non-Innovative Firms in Canada, **J. Baldwin and J. Johnson (February 1995)**

No. 74 Human Capital Development and Innovation: The Case of Training in Small and Medium Sized-Firms, **J. Baldwin and J. Johnson (March 1995)**

No. 75 Technology Use and Industrial Transformation: Emprirical Perspectives, **John Baldwin, Brent Diverty and David Sabourin (August 1995)**

No. 76 Innovation: The Key to Success in Small Firms, **John R. Baldwin (February 1995)**

No. 77 The Missing Link: Data on the Demand side of Labour Markets, **Lars Osberg (April 1995)**

No. 78 Restructuring in the Canadian Manufacturing Sector from 1970 to 1990: Industry and Regional Dimensions of Job Turnover, **J. Baldwin and M. Rafiquzzaman (July 1995)**

No. 79 Human Capital and the Use of Time, **Frank Jones (June 1995)**

No. 80 Why Has Inequality in Weekly Earnings Increased in Canada?, **René Morissette (July 1995)**

No. 81 Socio-Economic Statistics and Public Policy: A New Role For Microsimulation Modeling, **Michael C. Wolfson (July 1995)**

No. 82 Social Transfers, Changing Family Structure, and Low Income Among Children, **Garnett Picot and John Myles (September 1995)**

No. 83 Alternative Measures of the Average Duration of Unemployment, **Miles Corak and Andrew Heisz (October 1995)**

No. 84 The Duration of Unemployment: A User Guide, **Miles Corak and Andrew Heisz (December 1995)**

No. 85 Advanced Technology Use in Manufacturing Establishments, **John R. Baldwin and Brent Diverty (November 1995)**

No. 86 Technology Use, Training and Plant-Specific Knowledge in Manufacturing Establishments, **John R. Baldwin, Tara Gray and Joanne Johnson (December 1995)**

No. 87 Productivity Growth, Plant Turnover and Restructuring in the Canadian Manufacturing Sector, **John R. Baldwin (November 1995)**

No. 88 Were Small Producers the Engines of Growth in the Canadian Manufacturing Sector in the 1980s?, **John R. Baldwin (October 1996)**

No. 89 The Intergenerational Income Mobility of Canadian Men, **Miles Corak and Andrew Heisz (January 1996)**

No. 90 The Evolution of Payroll Taxes in Canada: 1961 - 1993, **Zhengxi Lin, Garnett Picot and Charles Beach (February 1996)**

No. 91 Project on Matching Census 1986 Database and Manitoba Health Care Files: Private Households Component, **Christian Houle, Jean-Marie Berthelot, Pierre David, Cam Mustard, L. Roos and M.C. Wolfson (March 1996)**

No. 92 Technology-induced Wage Premia in Canadian Manufacturing Plants during the 1980s, **John Baldwin, Tara Gray and Joanne Johnson (December 1996)**

No. 93 Job Creation by Company Size Class: Concentration and Persistence of Job Gains and Losses in Canadian Companies, **Garnett Picot and Richard Dupuy (April 1996)**

No. 94 Longitudinal Aspects of Earnings Inequality in Canada, **René Morissette and Charles Bérubé (July 1996)**

No. 95 Changes in Job Tenure and Job Stability in Canada, **Andrew Heisz (November 1996)**

No. 96 Are Canadians More Likely to Lose Their Jobs in the 1990s?, **Garnett Picot and Zhengxi Lin (August 6, 1997)**

No. 97 Unemployment in the Stock and Flow, **Michael Baker, Miles Corak and Andrew Heisz (September 1996)**

No. 98 The Effect of Technology and Trade on Wage Differentials Between Nonproduction and Production Workers in Canadian Manufacturing, **John R. Baldwin and Mohammed Rafiquzzaman (May 1998)**

No. 99 Use of POHEM to Estimate Direct Medical Costs of Current Practice and New Treatments Associated with Lung Cancer in Canada, **C. Houle, B.P. Will, J.-M. Berthelot, Dr. W.K. Evans (May 1997)**

No. 100 An Experimental Canadian Survey That Links Workplace Practices and Employee Outcomes: Why it is Needed and How it Works, **Garnett Picot, Ted Wannell (May 1997)**

No. 101 Innovative Activity in Canadian Food Processing Establishments: The Importance of Engineering Practices, **John Baldwin and David Sabourin (November 1999)**

No. 102 Differences in Strategies and Performances of Different Types of Innovators, **John R. Baldwin and Joanne Johnson (December 1997)**

No. 103 Permanent Layoffs in Canada: Overview and Longitudinal Analysis, **Garnett Picot, Zhengxi Lin and Wendy Pyper (September, 1997)**

No. 104 Working More? Working Less? What do Canadian Workers Prefer?, **Marie Drolet and René Morissette (May 20, 1997)**

No. 105 Growth of Advanced Technology Use in Canadian Manufacturing During the 1990's, **John Baldwin, Ed Rama and David Sabourin (December 14, 1999)**

No. 106 Job Turnover and Labour Market Adjustment in Ontario from 1978 to 1993, **Zhengxi Lin and Wendy Pyper (1997)**

No. 107 The Importance of Research and Development for Innovation in Small and Large Canadian Manufacturing Firms, **John R. Baldwin (September 24, 1997)**

No. 108 International Competition and Industrial Performance: Allocative Efficiency, Productive Efficiency, and Turbulence, **John R. Baldwin and Richard E. Caves (October 1997)**

No. 109 The Dimensions of Wage Inequality among Aboriginal Peoples, **Rachel Bernier (December 1997)**

No. 110 Trickling Down or Fizzling Out? Economic Performance, Transfers, Inequality and Low Income, **Myles Zyblock and Zhengxi Lin (December 10, 1997)**

No. 111 Corporate Financial Leverage: A Canada - U.S. Comparison, 1961-1996, **Myles Zyblock (December 1997)**

No. 112 An explanation of the Increasing Age Premium, **Constantine Kapsalis (July 1998)**

No. 113 The Intergenerational Earnings and Income Mobility of Canadian Men: Evidence from Longitudinal Income Tax Data, **Miles Corak and Andrew Heisz (October, 1998)**

No. 114 Foreign-Born vs Native-Born Canadians: A Comparison of Their Inter-Provincial Labour Mobility, **Zhengxi Lin (September 1998)**

No. 115 Living Arrangements and Residential Overcrowding: the situation of older immigrants in Canada, 1991, **K.G. Basavarajappa (September 1998)**

No. 116 What is Happening to Earnings Inequality and Youth Wages in the 1990s?, **Garnett Picot (July 1998)**

No. 117 The Determinants of the Adoption Lag for Advanced Manufacturing Technologies, **John R. Baldwin and Mohammed Rafiquzzaman (August 1998)**

No. 118 Labour Productivity Differences Between Domestic and Foreign-Controlled Establishments in the Canadian Manufacturing Sector, **John R. Baldwin and Naginder Dhaliwal (March 1, 2000)**

No. 119 Technology Adoption: A Comparison Between Canada and the United States, **John R. Baldwin and David Sabourin (August 1998)**

No. 120 Are There High-Tech Industries or Only High-Tech Firms? Evidence From New Technology-Based firms, **John R. Baldwin and Guy Gellatly (December 1998)**

No. 121 A Portrait of Entrants and Exits, **John R. Baldwin (June 1999)**

No. 122 Determinants of Innovative Activity in Canadian Manufacturing Firms: The Role of Intellectual Property Right, **John R. Baldwin, Petr Hanel and David Sabourin (March 7, 2000)**

No. 123 Innovation and Training in New Firms **John R. Baldwin (November 2000)**

No. 124 New Views on Inequality Trends in Canada and the United States, **Michael C. Wolfson and Brian B. Murphy (August 1998 and October 1999 (paper)**

No. 125 Employment Insurance in Canada: Recent Trends and Policy Changes, **Zhengxi Lin (September 1998)**

No. 126 Computers, Fax Machines and Wages in Canada: What Really Matters?, **René Morissette and Marie Drolet (October 1998)**

No. 127 Understanding the Innovation Process: Innovation in Dynamic Service Industries, **Guy Gellatly and Valerie Peters (December 1999)**

No. 128 Recent Canadian Evidence on Job Quality by Firm Size, **Marie Drolet and René Morissette (November 1998)**

No. 129 Distribution, Inequality and Concentration of Income Among Older Immigrants in Canada, 1990 , **K.G. Basavarajappa (April 1999)**

No. 130 Earnings Dynamics and Inequality among Canadian Men, 1976-1992: Evidence from Longitudinal Income Tax Records, **Michael Baker and Gary Solon (February 1999)**

No. 131 The Returns to Education, and the Increasing Wage Gap Between Younger and Older Workers, **C. Kapsalis, R. Morissette and G. Picot (March 1999)**

No. 132 Why Do Children Move Into and Out of Low Income: Changing Labour Market Conditions or Marriage and Divorce?, **G. Picot, M. Zyblock and W. Pyper (March 1999)**

No. 133 Rising Self-Employment in the Midst of High Unemployment: An Empirical Analysis of Recent Developments in Canada, **Zhengxi Lin, Janice Yates and Garnett Picot (March 1999)**

No. 134 The Entry and Exit Dynamics of Self-Employment in Canada, **Zhengxi Lin, Garnett Picot and Janice Yates (March 1999)**

No. 135 Death and Divorce: The Long-term Consequences of Parental Loss on Adolescents, **Miles Corak (June 9, 1999)**

No. 136 **Cancelled**

No. 137 Innovation, Training and Success, **John Baldwin (October 1999)**

No. 138 The Evolution of Pension Coverage of Young and Older Workers in Canada, **René Morissette and Marie Drolet (December 1999)**

No. 139 Import Competition and Market Power: Canadian Evidence, **Aileen J. Thompson (April 2000)**

No. 140 Gender Composition and Wages: Why is Canada Different from the United States, **Michael Baker and Nicole Fortin (August 2000)**

No. 141 The Transition to Work for Canadian University Graduates: Time to First Job, 1982-1990, **Julian Betts, Christopher Ferrall and Ross Finnie (December 2000)**

No. 142 Who Moves? A Panel Logit Model Analysis of Interprovincial Migration in Canada, **Ross Finnie (August 2000)**

No. 143 Differences in Innovator and Non-Innovator Profiles: Small Establishments in Business Services, **Guy Gellatly (December 1999)**

No. 144 Social Transfers, Earnings and Low-Income Intensity Among Canadian Children, 1981-1996: Highlighting Recent Development in Low-Income Measurement, **John Myles and Garnett Picot (March 2000)**

No. 145 How Much of Canada's Unemployment is Structural?, **Lars Osberg and Zhengxi Lin (October 2000)**

No. 146 To What Extent Are Canadians Exposed to Low-Income?, **René Morissette and Marie Drolet (April, 2000)**

No. 147 The Maturation of Canada's Retirement Income System: Income Levels, Income Inequality and Low-Income among the Elderly, **John Myles (March 6, 2000)**

No. 148 The Performance of the 1990s Canadian Labour Market, **Garnett Picot and Andrew Heisz (April, 2000)**

No. 149 Payroll Taxes in Canada Revisited: Structure, Statutory Parameters, and Recent Trends **Zhengxi Lin (August, 2001)**

No. 150 Patterns of Corporate Diversification in Canada: An Empirical Analysis, **John R. Baldwin, Desmond Beckstead, Guy Gellatly and Alice Peters (June, 2000)**

No. 151 Multinationals and the Canadian Innovation Process, **John R. Baldwin and Petr Hanel (June, 2000)**

No. 152 Rural Youth: Stayers, Leavers and Return Migrants, **Richard Dupuy, Francine Mayer and René Morissette (September 5, 2000)**

No. 153 Female Employment Rates and Labour Market Attachment in Rural Canada, **Euan Phimster, Esperanza Vera Toscano, Alfons Weersink (December 2000)**

No. 154 Training as a Human Resource Strategy: The Response to Staff Shortages and Technological Change, **John R. Baldwin and Valerie Peters (April 2001)**

No. 155 Job Tenure, Worker Mobility and the Youth Labour Market during the 1990s, **G. Picot, A. Heisz and A. Nakamura (March 2001)**

No. 156 The Impact of International Trade on the Wages of Canadians, **Omar Zakhilwal (December 2000)**

No. 157 The Persistent Gap: New Evidence on the Canadian Gender Wage Gap, **Marie Drolet (December 2000)**

No. 158 In Search of Intergenerational Credit Constraints Among Canadian Men: Quantile Versus Mean Regression Tests for Binding Crefdit Constraints, **Nathan D. Grawe (December 2000)**

No. 159 Intergenerational Influences on the Receipt of Unemployment Insurance in Canada and Sweden, **Miles Corak, Bjorn Gustaffson and Torun Osterberg (December 2000)**

No. 160 Neighbourhood Inequality in Canadian Cities, **John Myles, Garnett Picot and Wendy Pyper (December 13, 2000)**

No. 161 **Cancelled**

No. 162 The Evolution of Job Stability in Canada: Trends and Comparisons to U.S. Results, **Andrew Heisz (October 16, 2002)**

No. 163 The Effects of Inter-Provincial Mobility on Individuals' Earnings: Panel Model Estimates for Canada, **Ross Finnie (October, 2001)**

No. 164 Early Labour Market Outcomes of Recent Canadian University Graduates by Discipline: A Longitudinal, Cross-Cohort Analysis, **Ross Finnie (March 2002)**

No. 165 Innovation and Connectivity: The Nature of Market Linkages and Innovation Networks in Canadian Manufacturing Industries, **John Baldwin and Alice Peters (May 2001)**

No. 166 An Assessment of EI and SA Reporting in SLID, **Constantine Kapsalis (August, 2001)**

No. 167 **Cancelled**

No. 168 Enhancing Food Safety and Productivity: Technology Use in the Canadian Food Processing Industry, **John R. Baldwin and David Sabourin (May 2002)**

No. 169 Dynamics of the Canadian Manufacturing Sector in Metropolitan and Rural Regions, **John R. Baldwin and Mark Brown with Tara Vinodrai (November 2001)**

No. 170 Income Prospects of British Columbia University Graduates, **Andrew Heisz (May 2001)**

No. 171 Are the Kids All Right? Intergenerational Mobility and Child Well-being in Canada, **Miles Corak (October 2001)**

No. 172 Low-Income Intensity During the 1990s: The Role of Economic Growth, Employment Earnings and Social Transfers, **G. Picot, R. Morissette, J. Myles (January 24, 2003)**

No. 173 Impediments to Advanced Technology Adoption for Canadian Manufacturers, **John Baldwin and Zhengxi Lin (August, 2001)**

No. 174 Impact of the Adoption of Advanced Information and Communication Technologies on Firm Performance in the Canadian Manufacturing Sector, **John R. Baldwin and David Sabourin (October, 2001)**

No. 175 Skill Shortages and Advanced Technology Adoption, **David Sabourin (September, 2001)**

No. 176 Which Firms Have High Job Vacancy Rates in Canada?, **René Morissette, Xuelin Zhang (October 25, 2001)**

No. 177 A Tale of Three Cities: The Dynamics of Manufacturing in Toronto, Montreal and Vancouver, 1976-1997, **Tara Vinodrai (November 2001)**

No. 178 School Performance of the Children of Immigrants in Canada, 1994-98, **Christopher Worswick (November 14, 2001)**

No. 179 Changes in the Diversification of Canadian Manufacturing Firms (1973-1997): A Move to Specialization, **John R. Baldwin, Desmond Beckstead and Richard Caves (February 2002)**

No. 180 Differences in Interprovincial Productivity Levels, **John R. Baldwin, Jean-Pierre Maynard, David Sabourin and Danielle Zietsma (December 2001)**

No. 181 Does Parent or Child Know Best? An Assessment of Parent/Child Agreement in the Canadian National Longitudinal Survey of Children and Youth, **Lori Curtis, Martin Dooley and Shelley Phipps** (October 23, 2002)

No. 182 Effects of Selection Criteria and Economic Opportunities on the Characteristics of Immigrants, **Abdurrahman Aydemir** (October 23, 2002)

No. 183 Setting up Shop: Self-Employment Amongst Canadian College and University Graduates, **Ross Finnie, Christine Laporte, Maud-Catherine Rivard (March 2002)**

No. 184 Winners and Losers in the Labour Market of the 1990s, **Andrew Heisz, Andrew Jackson, Garnett Picot (February 2002)**

No. 185 Do Neighbourhoods Influence Long Term Labour Market Success? A Comparison of Adults who Grew Up in Different Public Housing Projects, **Philip Oreopoulos (June 2002)**

No. 186 Wives, Mothers and Wages: Does Timing Matter? **Marie Drolet (May 1, 2002)**

No. 187 The Evolution of Wealth Inequality in Canada, 1984-1999, **René Morissette, Xuelin Zhang and Marie Drolet (February 2002)**

No. 188 Management Experience and Diversity in an Aging Organization, **Ted Wannell and Martin Gravel (August 2002)**

No. 189 The Importance of Entry to Canadian Manufacturing with an Appendix on Measurement Issues, **John Baldwin, Desmond Beckstead and Andrée Girard (May 2002)**

No. 190 Financing Innovation in New Small Firms : Evidence From Canada, **John R,. Baldwin, Guy Gellatly and Valérie Gaudreault (May 2002)**

No. 191 Too Far to Go On? Distance to School and University Participation, **Marc Frenette (June 24, 2002)**

No. 192 Life After Welfare: The Economic Well-Being of Welfare Leavers in Canada during the 1990s, **Marc Frenette, Garnet Picot (March 26, 2003)**

No. 193 Plant Turnover and Productivity Growth in Canadian Manufacuturing, **John Baldwin, Wulong Gu (April 2, 2003)**

No. 194 Wage Progression of Less Skilled Workers in Canada: Evidence from the SLID (1993-1998), **Xuelin Zhang (December 6, 2002)**

No. 195 Do the Falling Earnings of Immigrants Apply to Self-Employed Immigrants?, **Marc Frenette (December 2002)**

No. 196 Minorities, Cognitive Skills and the Incomes of Canadians, **Ross Finnie and Ronald Meng (January 24, 2003)**

No. 197 The Wealth Position of Immigrant Families in Canada, **Xuelin Zhang (November 18, 2003)**

No. 198 The Rise in Low-Income Rates Among Immigrants in Canada, **Garnett Picot and Feng Hou (June 19, 2003)**

No. 199 Alternative Work Practices and Quit Rates: Methodological Issues and Empirical Evidence For Canada, **René Morissette and Julio Miguel Rosa (March 17, 2003)**

No. 200 Cohort Effects in Annual Earnings by Field of Study Among British Columbia University Graduates, **Andrew Heisz (September 26, 2003)**

No. 201 Access to College and University: Does Distance Matter?, **Marc Frenette (June 2003)**

No. 202 Learning From Failure: Organizational Mortality and the Resource-Based View, **S. Thornhill and R. Amit (August 8, 2003)**

No. 203 Effects of Business Cycles on the Labour Market Assimilation of Immigrants, **Abdurrahman Aydemir (July 31, 2003)**

No. 204 Visible Minority Neighbourhood Enclaves and Labour Market Outcomes of Immigrants, **Garnett Picot, Feng Hou (July 9, 2003)**

No. 205 Changing Trade Barriers and Canadian Firms: Survival and Exit After the Canada-U.S. Free Trade Agreement, **Jen Baggs (April 28, 2004)**

No. 206 Neighbourhood Attainment and Residential Segregation Among Toronto's Visible Minorities, **John Myles and Feng Hou (July 30, 2003)**

No. 207 Life cycle bias in the estimation of intergenerational earnings persistence, **Nathan Grawe (August 5, 2003)**

No. 208 Are Investment Expectations Rational? **Chetan Dave (December 17, 2004)**

No. 209 Working Hours in Canada and the United States, **Andrew Heisz and Sébastien LaRochelle-Côté (September 2003)**

No. 210 Family Income and Participation in Post-Secondary Education, **Miles Corak, Garth Lipps and John Zhao (October 1, 2003)**

No. 211 to 214 **Cancelled**

No. 215 Will They Ever Converge?: Earnings of Immigrant and Canadian-Born Workers over the Last Two Decades, **Marc Frenette and René Morissette (October 8, 2003)**

No. 216 How long do people live in low-income neighbourhoods? **Marc Frenette Garnett Picot and Roger Sceviour (January 2004)**

No. 217 Corporate Financial Leverage in Canadian Manufacturing: Consequences for Employment and Inventories, **Andrew Heisz and Sébastien LaRochelle-Côté (February 2004)**

No. 218 Have Permanent Layoff Rates Increased in Canada? **René Morissette (March 25, 2004)**

No. 219 Rising income inequality amid the economic recovery of the 1990s: An exploration of three data sources, **Marc Frenette, David Green and Garnett Picot (July 9, 2004)**

No. 219 REVISED: Rising Income Inequality in the 1990s: An Exploration of Three Data Sources, **Marc Frenette, David Green and Garnett Picot (December 16, 2004)**

No. 220 Factors Determining the Success or Failure of Canadian Establishments on Foreign Markets: A Survival Analysis Approach, **Jean Bosco Sabuhoro and Yvan Gervais (May 5, 2004)**

No. 221 Recent immigration and the formation of visible minority neighbourhoods in Canada's large cities, **Feng Hou (July 2, 2004)**

No. 222 The Deteriorating Economic Welfare of Immigrants and Possible Causes, **Garnett Picot (July 15, 2004)**

No. 223 The Retirement Plans and Expectations of Non-Retired Canadians Aged 45-59, **Grant Schellenberg (June 29, 2004)**

No. 224 Public Transit Use Among Immigrants, **Andrew Heisz, Grant Schellenberg (May 13, 2004)**

No. 225 Explaining the Deteriorating Entry Earnings of Canada's Immigrant Cohorts: 1966-2000, **Abdurrahman Aydemir and Mikal Skuterud (May 17, 2004)**

No. 226 Family Background and Access to Post Secondary Education: What Happened over the 1990s?, **Ross Finnie, Christine Laporte and Eric Lascelles (August 18, 2004)**

No. 227 A Longitudinal Analysis of Earnings Change in Canada , **Charles M. Beach and Ross Finnie (August 20, 2004)**

No. 228 Neighbourhood Inequality, Relative Deprivation and Self-perceived Health Status, **Feng Hou and John Myles (September 27, 2004)**

No. 229 Population Movement Into and Out of Canada's Immigrant Gateway Cities: A Comparative Study of Toronto, Montreal and Vancouver, **Feng Hou and Larry S. Bourne (September 13, 2004)**

No. 230 Earnings of Couples with High and Low Levels of Education, 1980-2000, **René Morissette et Anick Johnson (October 13, 2004)**

No. 231 Welfare Dynamics in Canada: The Role of Individual Attributes and Economic-Policy Variables, **Ross Finnie, Ian Irvine and Roger Sceviour (October 2004)**

No. 232 Relative Wage Patterns among the Highly Educated in a Knowledge-based Economy, **René Morissette, Yuri Ostrovsky and Garnett Picot (September 29, 2004)**

No. 233 Postsecondary Field of Study and the Canadian Labour Market Outcomes of Immigrants and Non-Immigrants, **Arthur Sweetman and Stephan McBride (October 28, 2004)**

No. 234 Immigrant Source Country Educational Quality and Canadian Labour Market Outcomes, **Arthur Sweetman (December 15, 2004).**

No. 235 The Evolution of the Gender Earnings Gap Amongst Canadian University Graduates, **Ross Finnie and Ted Wannell (November 30, 2004)**

No. 236 The Importance of Signalling in Job Placement and Promotion, **Andrew Heisz and Philip Oreopoulos (January 5, 2006)**

No. 237 Who Goes? The Direct and Indirect Effects of Family Background on Access to Post-secondary Education, **Ross Finnie, Eric Lascelles and Arthur Sweetman (January 18, 2005)**

No. 238 The Decline of the Immigrant Homeownership Advantage: Life-Cycle, Declining Fortunes and Changing Housing Careers in Montreal, Toronto and Vancouver, 1981-2001 **Michael Haan (February 3, 2005)**

No. 239 Are Good Jobs Disappearing in Canada? **René Morissette and Anick Johnson (January 26, 2005)**

No. 240 Income Inequality and Low Income in Canada: An International Perspective, **Garnett Picot and John Myles (February 10, 2005)**

No. 241 Ethnic Neighbourhoods and Male Immigrant Earnings Growth: 1981 through 1996, **Casey Warman (February 25, 2005)**

No. 242 Making the Transition: The Impact of Moving from Elementary to Secondary School on Adolescents' Academic Achievement and Psychological Adjustment, **Garth Lipps (March 1, 2005)**

No. 243 Participation in Post-secondary Education in Canada: Has the Role of Parental Income and Education Changed over the 1990's? **Marie Drolet (February 15, 2005)**

No. 244 Is Post-secondary Access More Equitable in Canada or the United States?, **Marc Frenette (March 15, 2005)**

No. 245 Social Assistance Use in Canada: National and Provincial Trends in Incidence, Entry and Exit, **Ross Finnie, Ian Irvine, and Roger Sceviour (May 30, 2005)**

No. 246 **Summary of:** Social Assistance Use in Canada: National and Provincial Trends in Incidence, Entry and Exit, **Ross Finnie, Ian Irvine, and Roger Sceviour (May 30, 2005) – Internet Only**

No. 247 Intergenerational Impact of Immigrants' Selection and Assimilation on Health Outcomes of Children, **Nina Ahmed (April 15, 2005)**

No. 248 Low-paid Work and Economically Vulnerable Families over the Last Two Decades, **René Morissette and Garnett Picot (April 25, 2005)**

No. 249 **Summary of:** Low-paid Work and Economically Vulnerable Families over the Last Two Decades, **René Morissette and Garnett Picot (April 25, 2005) – Internet only**

No. 250 Explaining the Increase in On-the-Job Search, **Mikal Skuterud (April 29, 2005)**

No. 251 Canadian Compulsory School Laws and their Impact on Educational Attainment and Future Earnings, **Philip Oreopoulo (May 19, 2005)**

No. 252 Are Immigrants Buying to Get In?: The Role of Ethnic Clustering on the Homeownership Propensities of 12 Toronto Immigrant Groups, 1996-2001 **Michael Haan (May 26, 2005)**

No. 253 **Summary of:** Are Immigrants Buying to Get In?: The Role of Ethnic Clustering on the Homeownership Propensities of 12 Toronto Immigrant Groups, 1996-2001, **Michael Haan (May 26, 2005) – Internet only**

No. 254 The Initial Destinations and Redistribution of Canada's Major Immigrant Groups: Changes over the Past Two Decades, **Feng Hou (June 29, 2005)**

No. 255 **Summary of:** The Initial Destinations and Redistribution of Canada's Major Immigrant Groups: Changes over the Past Two Decades, **Feng Hou (June 29, 2005) – Internet only**

No. 256 Trade Liberalization, Profitability, and Financial Leverage **Jen Baggs and James A.Brander (June 22, 2005)**

No. 257 **Summary of:** Trade Liberalization, Profitability, and Financial Leverage **Jen Baggs and James A.Brander (June 22, 2005) – Internet only**

No. 258 Tariff Reduction and Employment in Canadian Manufacturing, 1988-1994, **Sébastien LaRochelle-Côté (June 22, 2005)**

No. 259 **Summary of:** Tariff Reduction and Employment in Canadian Manufacturing, 1988-1994, **Sébastien LaRochelle-Côté (June 22, 2005)– Internet only**

No. 260 Firms, Industries, and Unemployment Insurance: An Analysis Using Employer-Employee Data from Canada, **Miles Corak and Wen-Hao Chen (June 30, 2005)**

No. 261 All In the Family: A Simultaneous Model of Parenting Style and Child Conduct, **Peter Burton, Shelley Phipps and Lori Curtis (August 2, 2005)**

No. 262 The Deteriorating Economic Welfare of Immigrants and Possible Causes: Update 2005, **Garnett Picot and Arthur Sweetman (June 27, 2005) – A revised version of Study No. 222, dated July 2004**

No. 263 The Impact of Tuition Fees on University Access: Evidence from a Large-scale Price Deregulation in Professional Programs, **Marc Frenette (September 27, 2005)**

No. 264 **Summary of:** The Impact of Tuition Fees on University Access: Evidence from a Large-scale Price Deregulation in Professional Programs, **Marc Frenette (September 27, 2005) – Internet only**

No. 265 The Instability of Family Earnings and Family Income in Canada, 1986 to 1991 and 1996 to 2001, **René Morissette and Yuri Ostrovsky (November 2, 2005)**

No. 266 **Summary of:** The Instability of Family Earnings and Family Income in Canada, 1986 to 1991 and 1996 to 2001, **René Morissette and Yuri Ostrovsky (November 2, 2005) – Internet only**

No. 267 Intergenerational Earnings Mobility Among the Children of Canadian Immigrants, **Abdurraham Aydemir, Wen-Hao Chen and Miles Corak (October 25, 2005)**

No. 268 The Impact of Macroeconomic Conditions on the Instability and Long-Run Inequality of Workers' Earnings in Canada, **Charles M. Beach, Ross Finnie and David Gray (February 7, 2006)**

No. 269 **Summary of**: The Impact of Macroeconomic Conditions on the Instability and Long-Run Inequality of Workers' Earnings in Canada, **Charles M. Beach, Ross Finnie and David Gray (February 7, 2006) – internet only**

No. 270 Differences in the Distribution of High School Achievement: The Role of Class Size and Time-in-term, **Miles Corak and Darren Lauzon (November 22, 2005)**

No. 271 Mandatory Retirement Rules and Retirement Decisions of University Professors in Canada, **Christopher Worswick (December 5, 2005)**

No. 272 Love and Money: Intergenerational Mobility and Marital Matching on Parental Income, **Jo Blanden (December 8, 2005)**

No. 273 The New Migration: Global Labour Markets, Return and Onward Migration, **Abdurrahman Aydemir and Chris Robinson (March 1, 2006)**

No. 274 Revisiting recent Trends in Canadian After-Tax Income Inequality Using Census Data, **Marc Frenette, David Green and Kevin Milligan (Febuary 27, 2006)**

No. 275 The Importance of Functional Literacy: Reading and Math Skills and Labour Market Outcomes of High School Drop-outs, **Ross Finnie and Ronald Meng (March 27, 2006)**

No. 276 Participation in Adult Schooling and its Earnings Impact in Canada, **Xuelin Zhang and Boris Palameta (March 24, 2006)**

No. 277 **Summary of:** Participation in Adult Schooling and its Earnings Impact in Canada, **Xuelin Zhang and Boris Palameta (March 24, 2006) – internet only**

No. 278 Work Hours Instability in Canada, **Andrew Heisz and Sébastien LaRochelle-Côté (March 29, 2006)**

No. 279 **Summary of:** Work Hours Instability in Canada, **Andrew Heisz and Sébastien LaRochelle-Côté (March 29, 2006) – internet only**

No. 280 Incentive Effects of Social Assistance: A Regression Discontinuity Approach, **Thomas Lemieux and Kevin Milligan (June 14, 2006)**

No. 281 Income and the Outcomes of Children, **Shelley Phipps and Lynn Lethbridge (May 11, 2006)**

No. 282 Why Did Employment and Earnings Rise Among Lone Mothers During the 1980s and 1990s? **John Myles, Feng Hou, Garnett Picot and Karen Myers (June 7, 2006)**

No. 283 Do Universities Benefit Local Youth? Evidence from University and College Participation, and Graduate Earnings Following the Creation of a New University, **Marc Frenette (January 25, 2007)**

No. 284 National Data Sets: Sources of Information for Canadian Child Care Data, **Dafna E. Kohen, Barry Forer and Clyde Hertzman (June 19, 2006)**

No. 285 Forthcoming

No. 286 Pension Coverage and Retirement Savings of Canadian Families, 1986 to 2003, **René Morissette and Yuri Ostrovsky (September 26, 2006)**

No. 287 Product Market Competition and Agency Costs, **Jen Baggs and Jean-Etienne de Bettignies (December 4, 2006)**

No. 288 International Mobility: Patterns of Exit and Return of Canadians, 1982 to 2003, **Ross Finnie (November 17, 2006)**

No. 289 International Mobility: A Longitudinal Analysis of the Effects on Individuals' Earnings, **Ross Finnie (January 18, 2007)**

No. 290 Cancelled

No. 291 Earnings Losses of Displaced Workers: Canadian Evidence from a Large Administrative Database on Firm Closures and Mass Layoffs, **René Morissette; Xuelin Zhang and Marc Frenette (January 16, 2007)**

No. 292 The Role of University Characteristics in Determining Post-graduation Outcomes: Panel Evidence from Three Recent Canadian Cohorts, **Julian Betts, Christopher Ferrall and Ross Finnie (February 26, 2007)**

No. 293 Understanding Regional Differences in Work Hours, **Andrew Heisz and Sébastien LaRochelle-Côté (January 22, 2007)**

No. 294 Chronic Low Income and Low-income Dynamics Among Recent Immigrants, **Garnett Picot, Feng Hou and Simon Coulombe (January 30, 2007)**

No. 295 Why Are Youth from Lower-income Families Less Likely to Attend University? Evidence from Academic Abilities, Parental Influences, and Financial Constraints, **Marc Frenette (February 8, 2007)**

No. 296 Gender Differences in Quits and Absenteeism in Canada, **Xuelin Zhang (February 23, 2007)**

No. 297 Income Instability of Lone Parents, Singles and Two-Parent Families in Canada, 1984 to 2004, **René Morissette and Yuri Ostrovsky (March 29, 2007)**

No. 298 Income Inequality and Redistribution in Canada: 1976 to 2004, **Andrew Heisz (May 11, 2007)**

No. 299 The Changing Role of Education in the Marriage Market: Assortative Marriage in Canada and the United States Since the 1970s, **Feng Hou and John Myles (May 18, 2007)**

No. 300 Offshoring and Employment in Canada: Some Basic Facts, **René Morissette and Anick Johnson (May 22, 2007)**

No. 301 Has Higher Education Among Young Women Substantially Reduced the Gender Gap in Employment and Earnings? **Marc Frenette and Simon Coulombe (June 12, 2007)**

No. 302 Life after the High-tech Downturn: Permanent Layoffs and Earnings Losses of Displaced Workers, **Marc Frenette (July 20, 2007)**

No. 303 Why Are Most University Students Women? Evidence Based on Academic Performance, Study Habits and Parental Influences, **Marc Frenette and Klarka Zeman (September 20, 2007)**

No. 304 How Do Families and Unattached Individuals Respond to Layoffs? Evidence from Canada, **René Morissette and Yuri Ostrovsky (February 21, 2008)**

No. 305 The Demographic Foundations of Rising Employment and Earnings Among Single Mothers in Canada and the United States, 1980 to 2000, **John Myles, Feng Hou, Garnett Picot and Karen Myers (March 7, 2008)**

No. 306 Income Security and Stability During Retirement in Canada, **Sébastien LaRochelle-Côté, John Myles and Garnett Picot (March 10, 2008)**

No. 307 Forthcoming

No. 308 Group Differences in Educational Attainment Among the Children of Immigrants, **Teresa Abada, Feng Hou and Bali Ram (September 22, 2008)**

No. 309 Earnings Inequality and Earnings Instability of Immigrants in Canada, **Yuri Ostrovsky (April 9, 2008)**

No. 310 Immigrants Working with Co-ethnics: Who Are They and How Do They Fare Economically? **Feng Hou (July14, 2008)**

No. 311 Long-run Inequality and Annual Instability of Men's and Women's Earnings in Canada, **Charles M. Beach, Ross Finnie and David Gray (December 18, 2008)**

No. 312 Remittance Behaviours Among Recent Immigrants in Canada, **René Houle and Grant Schellenberg (July 23, 2008)**

No.313 Cancelled

No. 314 The Post-childbirth Employment of Canadian Mothers and the Earnings Trajectories of Their Continuously Employed Counterparts, 1983 to 2004, **Xuelin Zhang (August 27, 2008)**

No. 315 Immigrant Characteristics, the IT Bust, and Their Effect on Entry Earnings of Immigrants, **Garnett Picot and Feng Hou (April 30, 2009)**

No. 316 Intergenerational Education Mobility Among the Children of Canadian Immigrants, **Abdurrahman Aydemir, Wen-Hao Chen and Miles Corak (October 2, 2008)**

No. 317 The Returns to Schooling on Academic Performance: Evidence from Large Samples Around School Entry Cut-off Dates, **Marc Frenette (November 7, 2008)**

No. 318 Internal Migration of Immigrants: Do Immigrants Respond to Regional Labour Demand Shocks? **Yuri Ostrovsky, Feng Hou and Garnett Picot (December 5, 2008)**

No. 319 Immigrant Economic and Social Outcomes in Canada: Research and Data Development at Statistics Canada, **Garnett Picot (December 16, 2008)**

No. 320 Career Goals in High School: Do Students Know What it Takes to Reach Them and Does it Matter? **Marc Frenette (October 29, 2009)**

No. 321 Pension Coverage, Retirement Status, and Earnings Replacement Rates Among a Cohort of Canadian Seniors, **Yuri Ostrovsky and Grant Schellenberg (December 23, 2009)**

No. 322 New Immigrants' Assessments, of Their Life in Canada, **René Houle and Grant Schellenberg (February 18, 2010)**

No. 323 Forthcoming

No. 324 Forthcoming

No. 325 New Homeownership over the Life Course of Canadians: Evidence from Canadian Censuses of Population, **Feng Hou (June 7, 2010)**